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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/413,348	10/06/1999	NORIHISA FUKUTOMI	Q56091	1912

7590 04/19/2002

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2100 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20037

EXAMINER

KIM, CHRISTOPHER S

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 04/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/413,348

Applicant(s)

FUKUTOMI ET AL.

Examiner

Christopher S. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-9 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 and 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Request for Continued Examination***

1. The Request for Continued Examination (RCE) filed on March 15, 2002 for Application No. 09/413,348 is acceptable and an RCE has been established. An action on the RCE follows.

### ***Response to Amendment***

2. Amendment filed January 14, 2002 has been entered.
3. Amendment filed March 15, 2002 is acknowledged.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Drawings***

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "arm" recited in claim 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "arm" recited in claim 2.

***Claim Rejections - 35 USC § 112***

7. Claims 2 and 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 8 recite "[a] fuel injection valve for opening and closing a needle by driving an armature with a solenoid comprising". It is uncertain whether applicant is claiming a combination of a fuel injection valve, a needle, an armature and a solenoid or the subcombination of a fuel injection valve. It appears that the fuel injection valve comprises a needle, an armature and a solenoid. Additionally, does the fuel injection valve comprise a means for damping or does the solenoid comprise a means for damping?

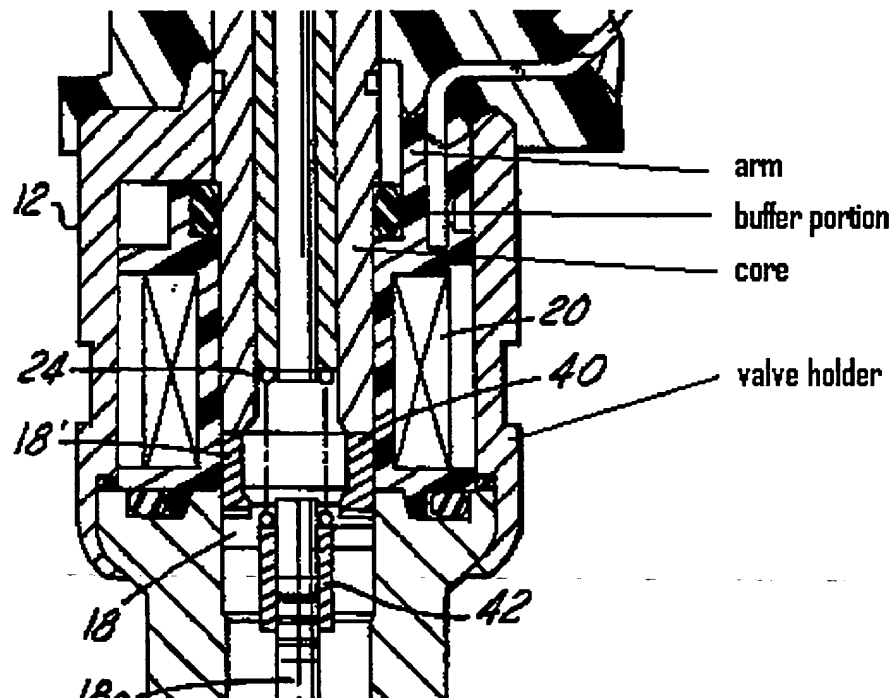
Claims 7 and 9 recite "[a] fuel injection valve for opening and closing a needle by driving an armature with a solenoid, comprising". It is uncertain whether applicant is claiming a combination of a fuel injection valve, a needle, an armature and a solenoid or the subcombination of a fuel injection valve. It appears that the fuel injection valve comprises a needle, an armature and a solenoid.

***Claim Rejections - 35 USC § 102***

8. Claims 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Asano (5,188,297).

Asano discloses a fuel injection valve comprising: a buffer portion/means for damping 39 being an elastic member (O-ring); a fuel passage 22f; an end face (down stream side of 32); a nozzle opening 27. O-ring 39 inherently functions as a buffer portion.

9. Claims 2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bata (5,427,319).



***Response to Arguments***

10. Applicant's arguments filed January 14, 2002 have been fully considered but they are not persuasive.

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In response to applicant's argument that the O-ring of Asano has a very small contact area and therefore it is impossible for the O-ring to generate any effective damping effect, applicant appears to be drawing conclusions which are not supported by the reference. Applicant discloses an O-ring. Asano too discloses an O-ring. Applicant's O-ring is positioned around the core. Asano's O-ring is also positioned around the core 36. Applicant's O-ring is fully encased by elements 17 and 4. Asano's O-ring is also encased (by elements 22, 38, 40, 36). If Asano's contact area is too small to generate any effective damping, how is applicant's contact area larger? Additionally, contact area, size of contact area and effectiveness (degree of damping) do not appear to be claimed limitations.

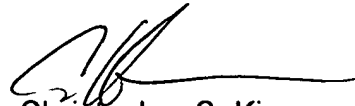
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry C. Yuen can be reached on (703) 308-1946. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7766 for regular communications and (703) 308-7766 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



Christopher S. Kim  
Examiner  
Art Unit 3752

CK  
April 17, 2002